

REMARKS

These remarks respond to the final rejection mailed August 10, 2005. Claims 11-19 have been allowed. Claims 1-3 have been canceled. Claims 5-11 stand as rejected. Claims 4-19 are currently pending in the application.

The Examiner indicated that claim 4 would be allowable if rewritten in independent form incorporating all of the limitations of the claims upon which it depends. Claim 4 has been amended accordingly to place it in allowable form.

Claim Rejections - 35 U.S.C. § 102

Claims 5-9 were rejected as anticipated by U.S. Patent No. 6,044,548 to Distefano et al. This rejection is respectfully traversed.

Independent claim 5 of the present application is directed to a method of bonding microelectronic elements to connection components using a deformable barrier. The conductive features of the microelectronic elements and connection components meet in a working space at least partially bounded by a deformable barrier. One embodiment of this claim is depicted in Fig. 13, wherein the microelectronic elements 510 and components 530 are placed on a fixture and a deformable barrier in the form of a flexible film is disposed over the rear surfaces of the microelectronic elements and the fixture, forming a working space 594.

Distefano discloses, inter alia, a method of joining a connection component with a microelectronic unit using pressure and adhesive. The Examiner points to col. 11, lines 21-29 and 42-55 of Distefano as anticipating claim 5. As discussed in the cited portions and depicted in Fig. 6, an assembly having a connection component 90 is placed onto a semi-conductor chip 92. The connection component 90 has a support layer 80. Distefano further discloses an adhesive layer 88 between the support layer 80 of the connection component and the semi-conductor chip 92.

Claim 5 of the present application specifically recites "a working space at least partially bounded by said deformable barrier." The Examiner has failed to point out how the adhesive or the support layer in Distefano creates a working space bounded by a deformable barrier. Indeed, the support layer and adhesive layers in Distefano are contained between the semiconductor chip and the connection component and do not create any working space at least partially bounded by those layers. Additionally, this rejection does not demonstrate where Distefano discloses maintaining a difference in pressure between the working space and the space outside of the working space. The "vacuum" teachings of the reference say nothing about such a pressure differential. One skilled in the art would understand these teachings as a suggestion to maintain all of the elements depicted in Fig. 6 within a conventional vacuum chamber much larger than the region depicted. This would not create a pressure differential across any of the regions shown in Fig. 6. Thus, Distefano fails to disclose or suggest all of the elements of claim 5.

Claim 6 depends on claim 5 and recites that the deformable barrier includes "a flexible film separate from" the components and microelectronic elements wherein the microelectronic elements are between the film and the components. The portions of Distefano relied upon by the Examiner merely point out a support layer and an adhesive layer, *both of which* are disposed between the connection component and the semi-conductor chip. The Examiner has failed to point to any portion of Distefano that discloses or suggests a deformable barrier including a flexible film separate from the components to be assembled, or disposing the microelectronic elements between such a separate film and connection components. Thus, Distefano does not disclose or suggest all of the elements of claim 6.

Applicants designate the remaining dependent claims as being allowable by virtue of their ultimate dependency upon allowable independent claims. Although Applicants have not separately argued the patentability of each of the dependent claims, Applicants' failure to do so is not to be taken as an admission that the features of the dependent claims are not themselves patentable over the prior art cited by the Examiner.

Conclusion

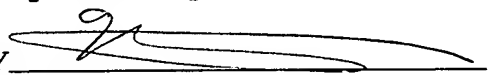
As it is believed that all of the rejections set forth in the Official Action have been fully met, favorable reconsideration and allowance are respectfully requested.

If, however, for any reason the Examiner does not believe that such action can be taken at this time, it is respectfully requested that he telephone applicants' attorney at (908) 654-5000 in order to overcome any additional objections which he might have.

If there are any additional charges in connection with this requested amendment, the Examiner is authorized to charge Deposit Account No. 12-1095 therefor.

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Respectfully submitted,

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